

NATURAL HISTORY MISCELLANEA

Published by

The Chicago Academy of Sciences

Lincoln Park - 2001 N. Clark St., Chicago 14, Illinois

No. 7

June 28, 1947

The *Gyrinophilus* Salamanders of Mt. Mitchell, North Carolina

NELSON G. HAIRSTON*

An attempt to identify a specimen of *Gyrinophilus* collected by the writer in Setrock Creek, Mt. Mitchell, Yancy County, North Carolina, on October 9, 1940, led to the discovery of a discrepancy in the literature. The following note is recorded for the benefit of future collectors.

Bishop (1924) stated that a large series of *Gyrinophilus danielsi* (Blatchley) was collected in "Steprock" Creek on October 21 and 22, 1923. He gave the altitude as over 6000 feet. This record has been widely quoted (Dunn, 1926; Brimley, 1939-41; Bishop, 1941; Bishop, 1943). Furthermore, Bishop's illustration of the species (1924, pl. 2) carries the additional information that the locality was Camp Alice. This former overnight stop for tourists was not located on "Steprock" Creek but on Lower Creek at an elevation of 5790 feet. Since Lower Creek is one of the two creeks that arise on the east side of Mt. Mitchell at an elevation of more than 6000 feet, it is probable that Bishop was collecting here rather than in "Steprock" Creek, which arises at an elevation of about 5200 feet on Little Mountain, an easterly projecting ridge of Mt. Mitchell. The name "Steprock" is an error that probably originated with the U. S. Geological Survey Map of 1902. The local name, as well as the name appearing on the Tennessee Valley Authority Map of 1942, is Setrock Creek. The only other creek arising above 6000 feet is Rock Creek, which drains the northeast face of the mountain. The Camp Alice locality record obviously rules out Rock Creek as the source of Bishop's specimens.

Mittleman and Jopson (1941) described *Gyrinophilus dunni* as a low-altitude species that is smaller than *G. danielsi* and has the throat unpigmented. *G. dunni* also has a slightly different dorsal pattern. These authors place the altitude range of the new form as below 3500 feet. Bishop (1924) refers to just such a specimen collected at an elevation between 4000 and 4500 feet. He is probably justified in regarding *dunni* as a subspecies of *danielsi* (Bishop, 1943).

The writer has collected two metamorphosed *Gyrinophilus* on Mt. Mitchell. The specimen referred to in the opening sentence was taken from Set-

*Department of Zoology, Northwestern University.

rock Creek at an elevation of 4800 feet. It has a total length of 123 mm., and a snout to vent length of 71 mm. The coloration and size agree closely with the original description of *G. danielsi dunnii*.

The second specimen was taken at the spring that is the source of Rock Creek, elevation 6500 feet, September 14, 1946. This specimen is 123 mm. in total length, snout to vent 72 mm. The dorsal pattern agrees with that of *G. d. danielsi*, the dark spots tending to coalesce. The throat is flecked with dark brown, but does not show the reticulation of brown and white that characterizes larger specimens (Bishop, 1943).

Mittleman and Jopson (1941) designated as a paratype of *dunnii* an individual from Cane River, which drains the west side of Mt. Mitchell. This specimen, taken at an elevation of 3000 feet, would appear to complete the series of records from this mountain.

These observations indicate that the 3500 foot elevation does not hold as an approximate separation of the two subspecies on the east side of Mt. Mitchell. An elevation of 5000 feet would probably be more accurate.

The various localities referred to are indicated on the accompanying map (Fig. 1).

LITERATURE CITED

Bishop, S. C.

1924 Notes on salamanders. *New York State Mus. Bull.*, 253, p. 87-102, pl. 1-3.
 1941 Notes on salamanders with descriptions of several new forms Occ. Papers Mus. Zool. Univ. Michigan, no. 451, p. 1-21, pl 1-2.
 1943 Handbook of salamanders. Comstock Publ. Co., Ithaca, N. Y., xiv + 555 p., 144 fig., 56 maps.

Brimley, C. S.

1939-1941 The amphibians and reptiles of North Carolina. Carolina Tips, Hon College, N. C. Amphibians: vol. 2, no. 1-7, p. 1-4, 6-7, 10-11, 14-15, 18-19, 22-23, fig. 12-22; vol. 3, no. 1-7, p. 2-3, 6-7, 10-11, 14-15, 18-19, 22-23, 26-27, fig. 1-11; vol. 4, no. 1, p. 2-3.

Dunn, E. R.

1926 The salamanders of the family Plethodontidae. *Smith College Anniv. Publ.* p. 1-441, 3 pls., 86 maps.

Mittleman, M. B., and Harry G. M. Jopson

1941 A new salamander of the genus *Cyrinophilus* from the southern Appalachians. *Smithsonian Misc. Coll.*, vol. 101, no. 2, p. 1-5, pl. 1.

Tennessee Valley Authority

1942 North Carolina. Parts of Celo and Black Brothers Quadrangles. Map. Knoxville, Tenn.

1942 North Carolina. Parts of Old Fort Montreat Quadrangles. Map. Knoxville, Tenn.

U. S. Geological Survey

1902 The Topographic Maps of the United States. North Carolina-Tennessee, Mount Mitchell Quadrangle. Reprinted 1942. Map. Washington, D. C.

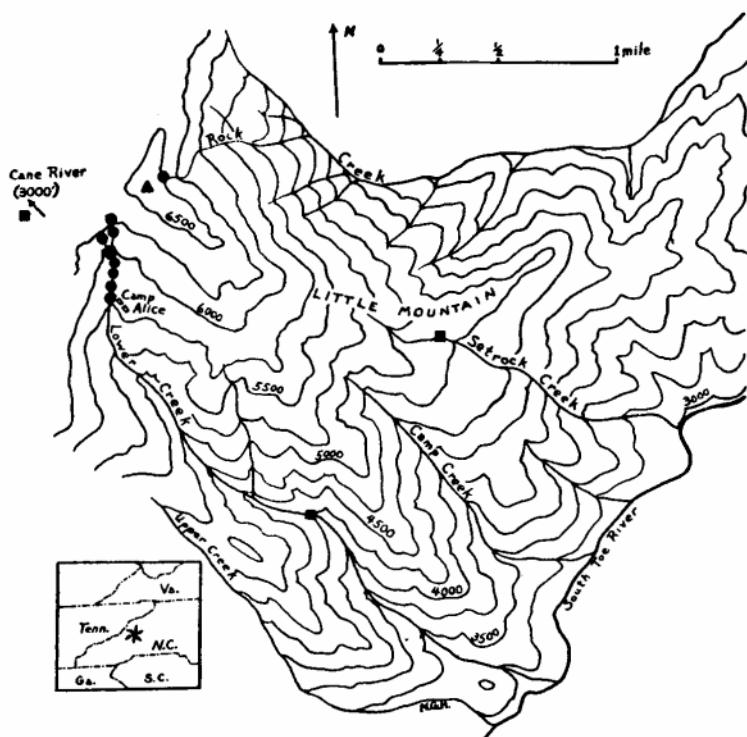


Figure 1

Contour map of the east side of Mt. Mitchell, showing local distribution of *Gyrinophilus*. Circles represent records of *G. d. danielsi*. Squares represent records of *G. danielsi dunni*. Triangle represents summit of Mt. Mitchell (6684 feet). Inset map of western North Carolina shows location of this mountain.

Natural History Miscellanea, a series of miscellaneous papers initiated in 1946 as an outlet for original articles, more or less technical in nature, one to four pages in length, in any field of natural history. Individual issues, published at irregular intervals, are numbered separately and represent only one field of specialization; e. g., botany, geology, entomology, herpetology, etc. The series is distributed to libraries and scientific organizations with which the Academy maintains exchanges. A title page and index will be supplied to these institutions when a sufficient number of pages to form a volume have been printed. Individual specialists with whom the museum or the various authors maintain exchanges receive those numbers dealing with their particular fields of interest. A reserve is set aside for future exchanges and a supply of each number is available for sale at a nominal price. Authors may obtain copies for their personal exchanges at the prevailing rates for similiar reprints.

H. K. Gloyd, Director of the Museum.

Committee on Publications:

Alfred Emerson, Hanford Tiffany, and C. L. Turner.